

S/N 10/019,214

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. - 58. (Canceled)

59. (Currently amended) A mutant strain of *H. pylori*, said mutant strain having deactivated at least one gene encoding a glyeosyltransferase galactosyltransferase involved in the biosynthesis of a *H. pylori* lipopolysaccharide (LPS), said mutant strain failing to produce a wild type O-chain in its LPS.

60. (Currently amended) A mutant strain according to claim 59, wherein the glyeosyltransferase galactosyltransferase is involved in the biosynthesis of the O-chain of the LPS, said mutant strain failing to produce a wild type O-chain in its LPS.

61. (Canceled)

62. (Currently Amended) A mutant according to claim 59, wherein the glyeosyltransferase galactosyltransferase is coded by open reading frame 0826 from *H. pylori* strain 26695 or SS1.

63. (Withdrawn) A vaccine composition comprising an antigen derived from a mutant strain of *H. pylori* according to claim 59.

64. (Withdrawn) A vaccine composition according to claim 63, wherein the antigen is an at least partially purified lipopolysaccharide.

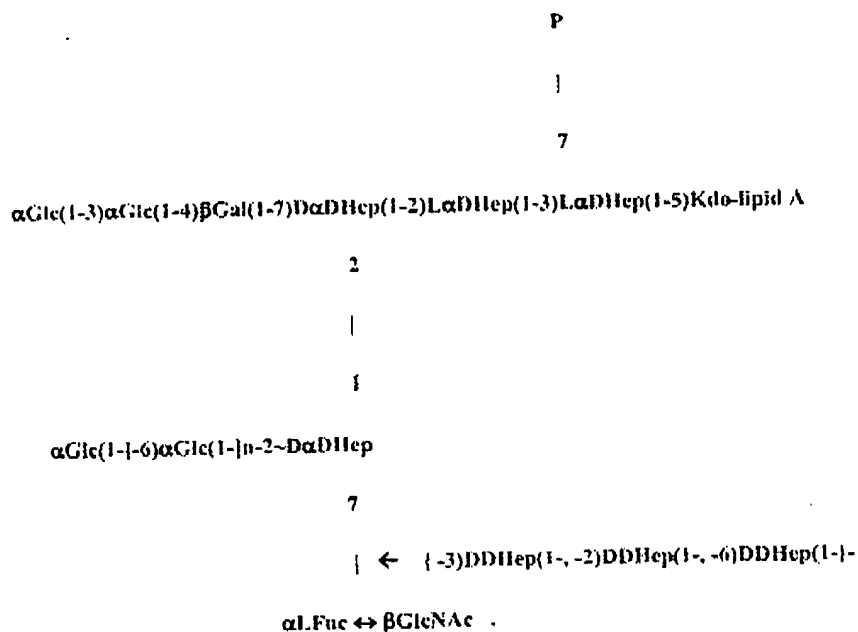
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65. (Withdrawn) A vaccine composition according to claim 64, wherein the antigen is conjugated to a protein.

66. (Withdrawn) A live attenuated vaccine composition comprising a mutant strain of *H. pylori* according to claim 59.

67. - 70. (Canceled)

71. (Previously presented) A mutant according to claim 62, producing LPS molecule with the structure:



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72. (New) A mutant according to claim 62, producing LPS molecule with the structure:

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$\alpha$ Glc(1-3) $\alpha$ Glc(1-4) $\beta$ Gal(1-7)D $\alpha$ DHep(1-2)L $\alpha$ DHep(1-3)L $\alpha$ DHep(1-5)Kdo-lipid A

2

|

1

D $\alpha$ DHep

7

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$\alpha$ LFuc  $\leftrightarrow$   $\beta$ GlcNAc